

REMARKS

Claims 1-6, 8-12, 14-18, and 20-24 are all the claims presently pending in the application.

Claims 1-2, 8, 14, and 21-23 are independent.

Applicant notes that, notwithstanding any claim amendments herein or later during prosecution, Applicant's intent is to encompass equivalents of all claim elements.

Applicant gratefully acknowledges that claims 2-6, 8-12, 14-18, and 20-24 are allowed. However, Applicant respectfully submits that all of the claims are allowable.

Claim 1 stands rejected under 35 U.S.C. § 103(a) as being obvious over the Umemoto et al. reference in view of the Kanemitsu reference.

This rejection is respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

An exemplary embodiment of the claimed invention, as defined by independent claim 1, is directed to an image scanner including a conveyor, a first light source, a second light source, an image information reader and a light source switching controller. The conveyor conveys a manuscript including image information to be read at a predetermined reading position (e.g., and as further exemplarily defined by new dependent claim 24, a predetermined stationary reading position) of a conveying route. The first light is located on one side of the conveying route and the second light is located on the other side of the conveying route. The image information reader reads the image information in the manuscript at the predetermined stationary reading position. The light source switching controller controls switching between the first and second

light sources to read the image information in the manuscript. The light source switching controller renders the first light on when the image information is defined by transmitting light through the manuscript and renders the second light on when the image information is defined by light reflected from the manuscript.

As shown in Fig. 1, conventional image scanners will hold a manuscript 75 stationary while the image on the manuscript 75 is read by scanning a sensor 78 in a scanning direction 77. Such scanners require elaborate mechanisms and a large amount of space to move the scanner 78 in this manner. Thus, not only do these scanners require elaborate and expensive mechanisms to move the scanner, but they also require a large amount of space to reserve an adequate amount of space for the sensor 78 to pass through while scanning. This problem is especially problematic when space must be reserved on both sides of the manuscript to allow reflection type scanning using a first lamp 79 on a first side and also to allow transmission type scanning using a second lamp 84 on a second side of the manuscript.

By contrast, as shown for example in Fig. 3, the present invention maintains a predetermined reading position (between first and second glass plates, 112 and 121) while causing the manuscript 111 to be conveyed past the predetermined reading position in order to scan the image on the manuscript 111. As a result, the present invention has a compact and simple design. The compact design of the present invention also enables both reflection and transmission type scanning.

II. THE PRIOR ART REJECTION

Regarding the rejection of claim 1, the Examiner alleges that the Kanemitsu reference would have been combined with the Umemoto et al. reference to form the claimed invention.

Applicant submits, however, that these references would not have been combined and even if combined, the combination would not teach or suggest each and every element of the claimed invention.

Applicant submits that these references would not have been combined as alleged by the Examiner. Indeed, the references are directed to completely different matters and problems.

Specifically, the Umemoto et al. reference is directed to fulfilling a need for a built-in type of radiation image recording and read-out apparatus which is small and inexpensive (col. 3, lines 4-6). More particularly, the Umemoto et al. reference is directed to providing a radiation image recording and read-out method which enables stimulating rays having comparatively long wavelengths to be used during the readout of a radiation image (col. 3, lines 28-32).

In contrast, the Kanemitsu reference is specifically directed to providing an image reading apparatus that is capable of reading both monochromatic and color images efficiently and at high speed (col. 3, lines 813).

One of ordinary skill in the art who was concerned with providing a radiation image recording and read-out method which enables stimulating rays having comparatively long wavelengths to be used during the readout of a radiation image as the Umemoto et al. reference is concerned with providing would not have referred to the Kanemitsu reference because the Kanemitsu reference is concerned with the completely different and unrelated problem of providing an image reading apparatus that is capable of reading both monochromatic and color images efficiently and at high speed. Thus, one of ordinary skill in the art would not have combined these references.

Further, Applicant submits that the Examiner can point to no motivation or suggestion in the references to urge the combination as alleged by the Examiner.

The Examiner alleges that one of ordinary skill in the art would have been motivated to modify the radiation image reading apparatus that is disclosed by the Umemoto et al. reference to include a lighting control unit 5 that is disclosed by the Kanemitsu reference because “[i]t would have provided users a method that includes a means for controlling at least one of the two light source (sic) in a manner that the light sources is illuminated (sic) in a ratio of amount of light in the rang (sic) of user’s perception.”

Firstly, contrary to the Examiner’s allegation, the Kanemitsu reference does not teach or suggest that the lighting control unit 5 has anything at all to do with controlling the lights “in a ratio of amount of light in the rang (sic) of user’s perception.” (Emphasis added). Rather, the Kanemitsu reference clearly explains that the lighting control unit 5 controls the light sources 2 and 3 based upon whether the image 7 is a multicolor image or a monochromatic image (col. 5, lines 10-24).

Secondly, the light sources 2 and 3 are not used to present the image to a user such that a ratio of the amount of light would need to be controlled such that it would match a user’s perception. Rather, the light sources 2 and 3 are only used to illuminate the image so that the color image pickup unit 1 will be provided with the correct wavelengths in accordance with whether the image is multicolor or monochromatic.

Third, the Examiner alleges that it would have been obvious to modify the radiation image apparatus that is disclosed by the Umemoto et al. reference to include the lighting control unit 5 that is disclosed by the Kanemitsu reference to control the light sources 111 and 113 “in a ratio of amount of light in the rang (sic) of user’s perception.” However, the light sources 111 and 113 are erasing light sources. The Umemoto et al. reference clearly explains that “[a] primary erasing light source 111, which constitutes a primary erasing section” (Emphasis added,

Col. 12, lines 47 - 49) and “A secondary erasing light source 113, which constitutes a secondary erasing section” (Emphasis added, Col. 12, lines 65-66). “The stimulable phosphor sheet 102 is subjected to a primary erasing operation, during which the stimulable phosphor sheet 102 is exposed to the primary erasing light produced by the primary erasing light source 111, in order to release any energy remaining on the stimulable phosphor sheet 102 after the radiation image has been read out therefrom.” (Emphasis added, Col. 13, lines 48-54). “[T]he stimulable phosphor sheet 102 is subjected to a secondary erasing operation, during which it is exposed to the secondary erasing light produced by the secondary erasing light source 113.” (Emphasis added, Col. 13, lines 62-66).

Therefore, rather than providing light that is present to a user, where it might be necessary to control the “ratio of amount of light in the rang (sic) of user’s perception,” (Emphasis added), the light sources 111 and 113 are used to erase an image and have absolutely nothing to do with presenting the image to a user such that the perception of the user might become relevant.

Moreover, even assuming arguendo that one of ordinary skill in the art would have been motivated to combine these references, the combination would not teach or suggest each and every element of the claimed invention. None of the applied reference teaches or suggests: 1) a first light which emits light onto a predetermined reading position; 2) a second light which emits light onto the same predetermined reading position but from an opposite side; 3) a light source switching control means which renders the first light on when the image is defined by light transmitting through the manuscript and which renders the second light on when the image information is defined by reflected light; and 4) an image defined by transmitted light or reflected light.

As explained above, these features are important for providing a compact and elegantly

simple design. The compact design of the present invention is also able to provide for both reflection and transmission type scanning.

Applicant is concerned that the Examiner continues to misrepresent and apparently misunderstands the applied references. The following arguments regarding the deficiencies of the Umemoto et al. were presented in the previous Amendment that was filed on August 28, 2003 and October 27, 2003 and during the personal interview with the Examiner on October 9, 2003.

The Examiner appears to completely ignore these previous presentations of the Applicant's arguments and does not provide any response to Applicant's arguments. Rather, the Examiner merely repeats the Examiner's misrepresentations regarding the Umemoto et al. reference.

The Examiner alleges that the Umemoto et al. reference discloses an image scanner and refers to Figure 1 in an attempt to support that allegation. The Examiner also alleges that the Umemoto et al. reference discloses a predetermined reading position which allegedly corresponds to "reading section 20" while referring to Figure 1. However, then switches to Figure 3 in an attempt to support the Examiner's allegation that the primary erasing light source 111 and the secondary erasing light source 113 both illuminate the same predetermined reading position.

Clearly, the primary erasing light source 111 and the secondary erasing light source 113 do not illuminate the same predetermined reading position that the Examiner alleges corresponds to the "reading section 20." Indeed, the "reading section 20" is in a completely different figure (Figure 1) from the primary erasing light source 111 and the secondary erasing light source 113 which are illustrated in Figure 3.

The Examiner alleges that the Umemoto et al. reference discloses a primary erasing light source 111 “which emits light onto said predetermined reading position.”

Firstly, contrary to the Examiner’s allegation, the primary erasing light source 111 does not emit light onto a reading position, let alone a predetermined reading position. Rather, as explained above and repeatedly explained previously, the Umemoto et al. reference discloses “[a] primary erasing light source 111, which constitutes a primary erasing section” (Emphasis added, col. 12, lines 47 - 49). Therefore, contrary to the Examiner’s allegation the primary erasing light source 111 does not illuminate a reading position. Rather, the primary erasing light source 111 that is disclosed by the Umemoto et al. reference illuminates “a primary erasing section.”

Similarly, contrary to the Examiner’s allegation, the secondary erasing light source 113 does not “emits light onto said predetermined reading position.” Indeed, the secondary erasing light source 113 does not emit light onto a reading position, let alone a predetermined reading position. Rather, as explained above and repeatedly explained previously, the Umemoto et al. reference discloses “A secondary erasing light source 113, which constitutes a secondary erasing section” (Emphasis added), (col. 12, lines 65-66). Therefore, contrary to the Examiner’s allegation the secondary erasing light source 113 does not illuminate a reading position. Rather, the secondary erasing light source 113 that is disclosed by the Umemoto et al. reference illuminates “a secondary erasing section” (col. 12, lines 65-66).

Secondly, contrary to the Examiner’s allegations, neither of the primary erasing light source 111 and the secondary erasing light source 113 illuminate the predetermined reading position. Indeed, the primary erasing light source 111 and the secondary erasing light source 113 do not even illuminate the same position, let alone the predetermined reading position that the Examiner alleges corresponds to the “reading section 20” that is illustrated in Figure 1 of the

Umemoto et al. reference.

Additionally, contrary to the Examiner's allegation, the Umemoto et al. reference does not teach or suggest an image defined by reflected light. Rather, the Umemoto et al. reference discloses exposing a stimulable phosphor sheet which emits light when exposed to stimulating rays. It is the emitted radiation that defines the image in the phosphor sheet, not the reflection of light. Emission of light is a mode of radiation which is completely different from reflection.

Further, the Examiner fails to point out where in any of the applied references the disclosure of an image defined by light transmission as recited by claim 1.

The Kanemitsu reference, like the Umemoto et al. reference also does not teach or suggest: 1) a first light which emits light onto a predetermined reading position; 2) a second light which emits light onto the same predetermined reading position but from an opposite side; 3) a light source switching control means which renders the first light on when the image is defined by light transmitting through the manuscript and which renders the second light on when the image information is defined by reflected light; and 4) an image defined by transmitted light or reflected light.

The Examiner has completely failed to allege that the Umemoto et al. reference or the Kanemitsu reference teaches the features of the present invention as recited by claim 1.

Indeed, the Examiner ignores the clear language of claim 1 which recites "light source switching control means for controlling light source switching between said first and said second light sources to read said image information included in said manuscript, said light source switching control means rendering only said first light source ON when said image information is defined by a transmitting light transmitting through said manuscript, said light source switching control means rendering only said second light source ON when said image information is

defined by a reflected light reflected by said manuscript.

To assist Applicant's understanding, Applicant hereby respectfully requests that the Examiner comply with the requirements of M.P.E.P. § 707.05 by explaining in detail the correspondence between the specific features recited by claim 1 and the particular portions of the Umemoto et al. reference or the Kanemitsu reference.

Note that MPEP 707.05 states:

"During the examination of an application or reexamination of a patent, the examiner should cite appropriate prior art which is nearest to the subject matter defined in the claims. When such prior art is cited, its pertinence should be explained"

Furthermore, absent specific citations of column and line numbers or specific figures, explaining in detail the correspondence between the specific features recited by claim 1 and the particular portions of the Umemoto et al. reference or the Kanemitsu reference, Applicant submits that if any subsequent Final Action on the merits would clearly be premature because of the Examiner's failure to comply with the requirements of a prima facie case of obviousness.

To further the prosecution of this application, however, Applicant has closely reviewed the Umemoto et al. reference and the Kanemitsu reference to address the clear differences between the Umemoto et al. reference and the Kanemitsu reference and claim 1.

Clearly, none of the applied references teaches or suggests a light source switching control means rendering only the first light source ON when the image information is defined by a transmitting light transmitting through the manuscript, said light source switching control means rendering only the second light source ON when the image information is defined by a reflected light reflected by the manuscript.

Therefore, the Examiner is respectfully requested to withdraw this rejection of claim 1.

Lastly, regarding the means plus function recitations, the Examiner has failed to interpret the claims to read only on the structures or materials disclosed in the specification and “equivalents thereof.” The Federal Circuit has made it clear that the Office is required to interpret means plus function language in accordance with 35 U.S.C. § 112, sixth paragraph (see M.P.E.P. §2106; *In re Donaldson*, 16 F.3d 1189, 1193 (Fed. Cir. 1994) and *In re Alappat*, 33 F.3d 1526, 1540 (Fed. Cir. 1994)). Clearly, the Examiner has failed to interpret the claims to read only on the structures or materials disclosed by the present specification and “equivalents thereof.”

III. FORMAL MATTERS AND CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully submits that claims 1-6, 8-12, 14-18, and 20-24, all the claims presently pending in the Application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the Application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

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